

[BALL-ACTUATED OPTICAL MOUSE]

Abstract

A ball-actuated optical mouse includes a housing holding a ball for rotation on a flat surface upon movement of the housing by the user, an image sensor for detecting the direction and amount of movement of the ball, a light source controlled by a sensor switch to emit light onto the ball upon rotation of the ball in the housing, and a refractor for refracting light from the light source onto the ball and focusing reflected light from the ball onto the image sensor through a circular arc surface thereof.